

REMARKS

Applicants respectfully acknowledge receipt of the Final Office Action mailed June 21, 2007.

In the Final Office Action, the Examiner objected to claim 11; rejected claims 2, 7, 11, and 14 under 35 U.S.C. § 102(b) as being anticipated by *Koshimizu* (U.S. Patent No. 6,162,323); and rejected claims 3, 6, 8, 9, 12, 13, and 15-18 under 35 U.S.C. § 103(a) as being unpatentable over *Koshimizu* in view of *Xi et al.* (U.S. Patent Pub. No. 2003/0198754).

By this Amendment, Applicants cancel claims 2, 3, 6-9, and 11-18, without prejudice or disclaimer, and add new claims 19-30. Upon entry of this Amendment, claims 19-30 will be pending in this application. Of these claims, claim 19 is independent.

The originally-filed specification, claims, abstract, and drawings fully support the addition of new claims 19-30. No new matter has been introduced.

Applicants traverse the objection and rejections above and respectfully request reconsideration for at least the reasons that follow.

I. OBJECTION TO THE CLAIMS

Claim 11 stands objected to because of a few informalities. The Examiner's objection to claim 11 has been rendered moot by the cancellation of claim 11. Applicants therefore request that the objection to claim 11 be withdrawn.

II. 35 U.S.C. § 102 REJECTION

Claims 2, 7, 11, and 14 stand rejected under 35 U.S.C. § 102(b) as being anticipated by *Koshimizu*. Applicants respectfully submit that the Examiner's rejection

has been rendered moot by the cancellation of claims 2, 7, 11, and 14. Applicants therefore request that the rejection of claims 2, 7, 11, and 14 under 35 U.S.C. § 102(b) be withdrawn.

III. 35 U.S.C. § 103 REJECTION

Claims 3, 6, 8, 9, 12, 13, and 15-18 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over *Koshimizu* in view of *Xi*. Applicants respectfully submit that the Examiner's rejection has been rendered moot by the cancellation of claims 3, 6, 8, 9, 12, 13, and 15-18. Applicants therefore request that the rejection of claims 3, 6, 8, 9, 12, 13, and 15-18 under 35 U.S.C. § 103(a) be withdrawn.

IV. NEW CLAIMS

New claims 19-30, though of different scope from cancelled claims 2, 3, 6-9, and 11-18, recite limitations similar to those with respect to claims 2, 3, 6-9, and 11-18.

With respect to new independent claim 19, *Koshimizu* fails to teach or suggest a method for processing a substrate, including introducing a process gas into a process chamber while an inside of the process chamber is evacuated by a first exhaust port in the process chamber; and introducing, after the substrate is plasma-processed, a cleaning gas into the process chamber while the inside of the process chamber is evacuated by a second exhaust port positioned lower than the first exhaust port in the process chamber, thereby cleaning the inside of the process chamber.

Koshimizu appears to disclose a plasma etching apparatus 600 including a plasma generating space 132, a processing space 134, first and second gas supply lines 136 and 144, respectively, a gas source unit 142, first and second exhaust lines

602 and 608, respectively, and an exhaust pump 606. (*Koshimizu*, col. 10, ll. 4-64 and FIG. 4).

Koshimizu, however, fails to disclose wherein a process gas is introduced into a process chamber while an inside of the process chamber is evacuated by exhaust port 608, which the Examiner alleges is analogous to the claimed “first exhaust port”; and wherein after a substrate is plasma-processed, a cleaning gas is introduced into the process chamber while the inside of the process chamber is evacuated by exhaust port 602, which the Examiner alleges is analogous to the claimed “second exhaust port,” thereby cleaning the inside of the process chamber (emphases added). Accordingly, new independent claim 19 is patentable over *Koshimizu*.

As explained above, *Koshimizu* fails to teach or suggest, *inter alia*, “introducing a process gas into [a] process chamber while an inside of said process chamber is evacuated by a first exhaust port in said process chamber . . . and introducing, after [a] substrate is plasma-processed, a cleaning gas into said process chamber while the inside of said process chamber is evacuated by a second exhaust port positioned lower than said first exhaust port in said process chamber, thereby cleaning the inside of said process chamber.” *Xi* also fails to overcome this deficiency.

The Examiner relies on *Xi* for allegedly disclosing “an apparatus...that includes a process chamber 10 with dual exhausts 18A, 18B, substrate support pedestal [46] . . . and a lift assembly (hoisting/lowering mechanism) 48 that enables up/down movement of support pedestal[;] . . . that at any given moment either one, or both or none of the exhaust is open to cavity[; and] . . . a controller 70 that regulates the operation of various components of the processing system . . .” (*Final Office Action*, p. 5, ll. 8-14).

Such teaching, even if present in *Xi*, however, fails to teach or suggest, *inter alia*, “introducing a process gas into [a] process chamber while an inside of said process chamber is evacuated by a first exhaust port in said process chamber . . . and introducing, after [a] substrate is plasma-processed, a cleaning gas into said process chamber while the inside of said process chamber is evacuated by a second exhaust port positioned lower than said first exhaust port in said process chamber, thereby cleaning the inside of said process chamber.” Therefore, *Xi* also fails to teach or suggest all of the limitations of new independent claim 19. Accordingly, new independent claim 19 is also patentable over *Xi*.

New claims 20-30 depend from claim 19 and are allowable at least for the same reasons claim 19 is allowable. In addition, each of the dependent claims recites unique combinations that are neither taught nor suggested by the cited art, and therefore each also is separately patentable.

V. CONCLUSION

Applicants respectfully submit that independent claim 19 is in condition for allowance. In addition, claims 20-30 are in condition for allowance at least due to their dependence from independent claim 19.

The Office Action contains characterizations of the claims and the related art with which Applicants do not necessarily agree. Unless expressly noted otherwise, Applicants decline to subscribe to any statement or characterization in the Office Action.

In view of the foregoing amendments and remarks, Applicants respectfully request reconsideration and reexamination of this application and the timely allowance of the pending claims.

Please grant any extensions of time required to enter this response and charge any additional required fees to our deposit account 06-0916.

Respectfully submitted,

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